If primary current at the relay will be $> 100 \, \Omega$,

\[ \text{Means that the error in reproduction} \]

\[ \frac{100}{\text{Rate}} \rightarrow \text{Rate} = 8 \]

\[ \downarrow \]

\[ \text{CTF} = \frac{14 \text{ or 6A}}{14 \text{ or 6A}} \]

\[ \left( \frac{100}{\text{Rate}} \right)^{\frac{1}{128}} \]

\[ \left( \frac{N \cdot \text{Irated}}{\text{Irated}} \right) \]

\[ \left( \frac{1}{1 + \frac{1}{X}} \right) \]

\[ \frac{\text{Actual fault current}}{\text{TSC cables}} \]
2. Pay attention to four types (S6, L1, 3G, B6).

2. The constant \( \frac{y}{x} \) ratio

\[ \frac{y}{x} \leq \text{decay of offset, with } \frac{1}{x+1} \leq \text{decay of offset.} \]

If it is not long enough

or some prolonged dc offset will saturate

so conveniently induced current

\[ \text{normal fault, these conditions} \]

i.e. \( \left( 1 + \frac{y}{x} \right) \) has a big impact

Things to consider with equation
\[ V = 84A, \quad G = 480V \]
\[ Z_b = 60 \quad \text{ohms} \]
\[ Z_{in} = 80 \text{A rms} \]
\[ I_{prim} = \frac{V}{Z_{prim}} \]

For full ampere knee is at 600V

Notice that the per ampere

\[ V_{per \text{amp}} = 1.783 \quad \text{V} \]

\[ \frac{V_{per \text{amp}}}{\text{per amp}} = \frac{240 \text{V}}{1200} \]

\[ V_{1200} = 428 \quad \text{V} \]

Secondary: \[ R_{\text{primary}} = 0.024 \text{ ohms} \]

\[ \text{Primary: } I = 1 \text{ A} \]

Secondary: \[ R_{\text{primary}} = 0.58 \text{ U} \]

At the bottom of the knee of the saturation curve (read from the graph)
Plot again on a linear scale.
Saturation

\[ I(\theta) = \frac{P}{r} (\cos(\theta) + 1) - \frac{1}{2} \cos(\theta) \]

Shade shaded the transition (transition)

- Missed the transition (transition)
- Speed-state and results
- Four programs give

- transient simulation tools
Microprocessor relay

\[ e(t) = a e^{j\omega t} \]

digital cosine filter
- Run Simulation
  - play file back to
    relay (or to amplifiers)
  - COMTRADE file format

- Hardware in the loop simulation
  - physical or only simulation
  - real-time digital simulation